

*cont'd B*  
a winding, [characterized in that] wherein the generator [(100)] is provided with solid insulation and in that each winding is arranged to be directly connected via coupling elements [(109)] to a transmission or distribution network [(110)] having a voltage of about between 20 and 800 kV[, preferably higher than 36 kV].

Claim 2 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

*B*  
a<sup>2</sup> Claim 3. (Amended) *A* plant as claimed in [either of claims] claim 1 [or 2],  
[characterized in that] wherein the generator comprises a magnetic circuit with a magnetic core.

Claim 4 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

*B2* Claim 5. (Amended) *A* plant as claimed in [any of claims] claim 1[ 4],  
[characterized in that] wherein the solid insulation is built up of a cable [(8)] intended for high voltage comprising one or more current-carrying conductors [(31)] surrounded by at least two semiconducting layers [(32, 34)] and intermediate insulating layers [(33)] of solid insulation.

*Q3*  
112 Claim 6. (Amended) *A* plant as claimed in claim 5, [characterized in that]  
wherein the innermost semiconducting layer [(32)] is at substantially the same  
potential as the conductor(s) [(31)].

Claim 7. (Amended) A plant as claimed in [either] claim 5 [or claim 6],

*113* [characterized in that] wherein one of the outer semiconducting layers [(34)] is

*Q3 B2*  
arranged to form essentially an equipotential surface surrounding the conductor(s)

*[(31)]*

Claim 8 (Amended), line 1, ~~delete "characterized in"~~;

Line 2, ~~delete "that" and insert --wherein--; delete "(34)"~~.

Claim 9 (Amended), line 1, ~~delete "characterized in"~~;

Line 2, ~~delete "that" and insert --wherein--~~.

*D*  
*sub*  
Claim 10. (Amended) ~~A plant as claimed in [any of claims 5-9, characterized in that] claim 5, wherein at least two of said layers have substantially the same coefficient of thermal expansion.~~

*Claim 11. (Amended) A plant as claimed in [any of claims] claim 5[-7], [characterized in that] the current-carrying conductor comprises a plurality of strands, only a few of the strands being uninsulated from each other.*

*Q4*  
Claim 12. (Amended) ~~A plant as claimed in [any of claims] claim 1[-11], [characterized in that] wherein the winding consists of a cable comprising one or more current-carrying conductors [(2)], each conductor consisting of a number of strands, an inner semiconducting layer [(3)] being arranged around each conductor, an insulating layer [(4)] of solid insulation being arranged around each inner semiconducting layer [(3)] and an outer semiconducting layer [(5)] being arranged around each insulating layer [(4)]~~

Claim 13 (Amended), line 1, ~~delete "characterized in"~~;

Line 2, ~~delete "that" and insert --wherein--~~.

*bold B* (3) Claim 14. (Amended) A plant as claimed in [any of the preceding claims, characterized in that] claim 1, wherein its stator [(1)] is cooled at earth potential by means of a flow of gas and/or liquid.

*bold B* (5) Claim 15. (Amended) A plant as claimed in [any of the preceding claims, characterized in that] claim 1, wherein the outermost semi-conductor layer [(34)] is connected to earth potential.

Claim 16. (Amended) A plant as claimed in [any of the preceding claims, characterized in that] claim 1, wherein the rotor [(2)] is inductively connected to the high voltage.

Claim 17 (Amended), line 1, ~~delete "characterized in";~~

Line 2, ~~delete "that" and insert --wherein--; delete "(2)".~~

Claim 18 (Amended), line 1, ~~delete "characterized in";~~

Line 2, ~~delete "that" and insert --wherein--.~~

Claim 19 (Amended), line 1, ~~delete "characterized in";~~

Line 2, ~~delete "that" and insert --wherein--.~~

*bold B* (5) Claim 20. (Amended) A plant as claimed in [claims] claim 18 [or claim 19], characterized in that] wherein the stator has concentrated winding and that coils in the winding have a coil span equal to the pole pitch.

Claim 21. (Amended) A plant as claimed in claim 18 [or claim 19, characterized in that] wherein the coils in the stator winding are distributed and have a coil span different from the pole pitch.

*6*  
Claim 22. (Amended) A plant as claimed in [any of claims] claim 5[21].  
[characterized in that] the cables [(6)] with solid insulation have a conductor area of about between 40 and 3000 mm<sup>2</sup> and have an outer cable diameter of about between 20 and 250 mm.

*the*  
Claim 23. (Amended) A plant as claimed in claim 22, [characterized in that] wherein the cable [(6)] is cooled by gas or liquid inside the current-carrying conductors [(31)].

*15*  
Claim 24. (Amended) A plant as claimed in [any of the preceding claims, characterized in that] claim 1, wherein the electric generator [(100)] is designed for high voltage and arranged to supply the out-going electric network [(110)] directly without any intermediate connection of a transformer.

Claim 25. (Amended) A plant as claimed in [any of the preceding claims, characterized in that] claim 1, [it comprises] comprising several generators, each of which lacks an individual step-up transformer, but which, via a system transformer common to the generators, is connected to the transmission or distribution network.

Claim 26. (Amended) A plant as claimed in claim 24, [characterized in that] wherein at least one generator [100] is earthed via an impedance [(103)].

Claim 27 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert wherein; delete "(100)".

*112* Claim 28. (Amended) A plant as claimed in [any of claims] claim 24[-27],  
[characterized in that] wherein it is designed to be driven [alternatively] as at least  
one of a pump and turbine station, the electric machine [(100)] being arranged to  
function as at least one of a motor driven directly from the electric power network  
[(110) or] and as generator generating voltage for the electric power network.

Claim 29 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

*112* Claim 30. (Amended) A plant as claimed in claim 29, [characterized in that]  
wherein one of said voltage levels is arranged to generate auxiliary power and that  
the auxiliary power is arranged to be generated from a separate winding [(119; 113)]  
in the generator [(100)].

*112* Claim 31. (Amended) A plant as claimed in [any of claims] claim 1[-30],  
[characterized in that] wherein all components are earthed to the same earth  
system.

Claim 32. (Amended) A plant as claimed in [any of the preceding claims]  
claim 1, [characterized in that] wherein the winding of the generator is arranged for  
self-regulating field control and lacks auxiliary means for control of the field.

*112* Claim 33. (Amended) Procedure for constructing a plant as claimed in [any of  
claims 1-32, characterized in that] claim 1, wherein the stator of the generator is  
delivered in parts to the plant site, said parts comprising separate stator laminations

*cont'd p 17*  
and/or combined stacks of stator laminations, after which said parts are assembled on site, and in that both threading of the winding and any splicing required are performed on site.

*28*  
Claim 34. (Amended) An electric generator [(100)] for high voltage included in a hydro-generator plant in which the generator is coupled to a turbine [(102)] via shaft means [(101)], said generator [(100)] comprising at least one winding, [characterized in that] the generator [(100)] is provided with solid insulation and in that each winding is arranged to be directly connected via coupling elements [(109)] to a transmission or distribution network [(110)] having a voltage of between about 20 and 800 kV[, preferably higher than 36 kV].

*a 9*  
Add new claims 37-49 as follows:

*b67* --37. A hydrogenerator plant including a rotating high voltage electric machine comprising a stator; a rotor and a winding, wherein said winding comprises a cable including at least one current-carrying conductor and a magnetically permeable, electric field confining cover surrounding the conductor, said cable forming at least one uninterrupted turn in the corresponding winding of said machine.

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38. The hydrogenerator plant of claim 37, wherein the cover comprises an insulating layer surrounding the conductor and an outer layer surrounding the insulating layer, said outer layer having a conductivity sufficient to establish an equipotential surface around the conductor.

39. The hydrogenerator plant of claim 37, wherein the cover comprises an inner layer surrounding the conductor and being in electrical contact therewith; an insulating layer surrounding the inner layer and an outer layer surrounding the insulating layer.

40. The hydrogenerator plant of claim 39, wherein the inner and outer layers have semiconducting properties.

*b9* 41. The hydrogenerator plant of claim 37, wherein the cover is formed of a plurality of layers including an insulating layer and wherein said plurality of layers are substantially void free.

*incert fuel* 42. The hydrogenerator plant of claim 37, wherein the cover is in electrical contact with the conductor. *B*

43.

44. The hydrogenerator plant of claim 42, wherein the layers of the cover have substantially the same temperature coefficient of expansion.

45. The hydrogenerator plant of claim 44, wherein the machine is operable at 100% overload for two hours.

46. The hydrogenerator plant of claim 37, wherein the cable is operable free of sensible end winding loss.

47. The hydrogenerator plant of claim 37, wherein the winding is operable free of partial discharge and field control.